

**REMARKS**

This paper is responsive to the Non-Final Office Action dated February 9, 2005 (“the Office Action”).

Claims 1-22 were previously pending in the application.

Claims 1-22 stand rejected.

No claims are added or canceled in this paper.

Accordingly, claims 1-22 remain pending.

Claims 1-8 stand rejected under 35 U.S.C. § 101 as being directed to non-statutory subject matter. Claims 1, 3, 6, 9-14, and 16-21 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,006,192 issued to Cheng et al. (“*Cheng*”) in view of U.S. Patent No. 5,930,762 issued to Masch (“*Masch*”). Claims 2, 4, 5, 7, 8, 10, 11, 15, and 22 stand rejected under § 103(a) as being unpatentable over *Cheng* in view of *Masch* and further in view of U.S. Patent No. 6,453,303 issued to Li. (“*Li*”). Claims 1, 9, and 16 have been amended. The amendments add no new matter.

While not conceding that the cited references qualify as prior art, but instead to expedite prosecution, Applicant has chosen respectfully to address the rejection in the Office Action as follows. Applicant reserves the right, for example in a continuing application, to establish that one or more of the cited references do not qualify as prior art as to an invention embodiment previously, currently, or subsequently claimed. Applicant respectfully submits that the claims are patentable and respectfully requests reconsideration of the pending rejections in view of the remarks presented herein.

*The Rejections under 35 U.S.C. § 101*

Claims 1-8 stand rejected under § 101 as being directed to non-statutory subject matter. As amended, independent claim 1 is directed to a “computer-implemented method for risk analysis under uncertainty.” Claims 2-8 depend from claim 1. Applicant respectfully submits

that amended claims 1-8 apply, involve, use, or advance the technological arts, are directed to statutory subject matter, and are allowable under § 101.

*The Combinations of References are Improper under 35 U.S.C. § 103(a)*

Claims 1, 3, 6, 9-14, and 16-21 stand rejected under § 103(a) as being unpatentable over *Cheng* in view of *Masch*. Claims 2, 4, 5, 7, 8, 10, 11, 15, and 22 stand rejected under § 103(a) as being unpatentable over *Cheng* in view of *Masch* and further in view of *Li*. Applicant respectfully submits that the Office Action fails to state a *prima facie* case of obviousness under § 103(a).

To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on applicant's disclosure.

MPEP § 2142 (citing *In re Vaeck*, 947 F.2d 488, 20 U.S.P.Q.2d 1438 (Fed. Cir. 1991)). Further, “[t]he initial burden is on the examiner to provide some suggestion of the desirability of doing what the inventor has done.” *Id.* (citing *Ex parte Clapp*, 227 U.S.P.Q. 972, 973 (Bd. Pat. App. & Inter. 1985)).

Claim 1 of the present application is directed to a computer-implemented method that includes limitations of submitting a request for analysis to an analytic engine for calculation of risk and performance indicators, the request for analysis including one or more analysis parameters and identifying the scenario and component plan.

As noted in the Office Action, *Cheng* does not disclose these limitations. Office Action at 4. To propose a disclosure of these limitations, the Office Action turns to *Masch*, and proposes combining the references to modify the system of *Cheng* with the teachings of *Masch*. The indicated suggestion or motivation for combining these references is “to aid decision makers in selecting an implementable strategy.” Office Action at 4.

Even if the Office Action's characterization of the cited art is correct (and Applicant does not concede this point), Applicant respectfully submits that the proposed combination of references is improper under § 103(a) because a person having ordinary skill in the art would not have a motivation to make this combination. The stated suggestion for making the combination of references is not based on any teaching or observation in *Cheng* that points a reader skilled in the art to seek another reference (such as *Masch*). Rather, *Cheng* itself sets forth techniques that aid decision makers in selecting an implementable strategy. For example, *Cheng* refers to existing tools for obtaining implementable policies. *Cheng* at col. 2, lines 19-25. Further, *Cheng* provides additional techniques and observations "to make the production plan implementable." *Id.* at col. 8, lines 30-32. Thus, with regard to the proposed motivation for combining references, *Masch* is unnecessary. A person skilled in the art would not have a motivation to combine *Masch* with *Cheng*, since the teachings of *Cheng* obviate the need for such a combination.

The Office Action therefore does not establish a *prima facie* case of obviousness of claim 1. Accordingly, independent claim 1 and all claims dependent therefrom are allowable under § 103(a). At least for similar reasons, independent claims 9 and 16 and all claims dependent therefrom are also allowable under § 103(a).

*The Cited References Do Not Disclose Each Limitation  
of the Claims Rejected under 35 U.S.C. § 103(a)*

Independent claim 1 includes several limitations that are not disclosed in the cited references. For example, neither *Cheng* nor *Masch* discloses the limitations of "specifying a component plan to be analyzed, the component plan identifying the quantities of each component that are positioned for each planning period." The Office Action states that this limitation is disclosed at col. 3, lines 9-60 of *Cheng*. Office Action at 4. Applicant respectfully disagrees.

The cited section of *Cheng* introduces mathematical quantities used in the ensuing discussion of a materials planning problem. Among the quantities introduced are  $Q_{i,t}$  and  $X_{i,t}$ , defined as:

$Q_{i,t}$ , ending inventory of component  $i \in I$  in period  $t$ .

$X_{i,t}$ , production/procurement volume of component  $i \in I$  in period  $t$ .

*Cheng* at col. 3, lines 43, 45-46. However, *Cheng* fails to disclose at least two limitations of pending claim 1.

First, the inventory of components  $Q_{i,t}$  and the production/procurement volume  $X_{i,t}$  in *Cheng* are identified as variables. *Id.* at col. 3, line 39. These are not quantities that are specified by a user as an input for to be analyzed. Rather, they are internal variables used by a mathematical analysis. Although an initial inventory may be specified by a user of the *Cheng* system, this initial inventory is input only once: “at the beginning of the planning horizon.” *Id.* at col. 3, lines 51-52.

Claim 1 includes “specifying a component plan to be analyzed, the component plan identifying the quantities of each component that are positioned for each planning period.” Thus, the component plan includes information specified prior to the ensuing analysis, rather than being formulated during the course of analysis. Further, the component plan identifies quantities of each component “for each planning period.” This limitation is not present in *Cheng*, which identifies at most one initial inventory at the beginning of an entire planning horizon. *Id.*

Since this limitation is not disclosed in the cited art, independent claim 1 and all claims dependent therefrom are allowable under § 103(a). At least for similar reasons, independent claims 9 and 16 and all claims dependent therefrom are also allowable under § 103(a).

Second, the quantities  $X_{i,t}$  and  $Q_{i,t}$  in *Cheng* indicate a production/procurement volume and an inventory quantity. Neither of these quantities is a quantity of components “positioned for each planning period,” as set forth in independent claim 1.

As set forth in the Definitions set forth in the specification, “positioning is an alternative to ordering components.” By positioning a component, a company or other entity “arrange[s] for

it to be available without actually putting the component in inventory. Thus, as an example, a supplier may agree to provide a certain quantity of a component during a time frame. The component is positioned in that quantity for that time frame.” Specification at 5.

The calculations set forth in *Cheng* do not use information regarding positioned components. *Cheng* does not recognize the possibility of using positioned components. Rather, *Cheng* only relates to amounts of components that are available in inventory, and does not use a distinction between inventoried components and positioned components.

Accordingly, *Cheng* does not discuss, teach, or suggest “identifying the quantities of each component that are positioned for each planning period.” Thus, this additional limitation is not disclosed in *Cheng*. Further, this limitation is also not disclosed in *Masch* or in *Li*. For these reasons as well, independent claim 1 and all claims dependent therefrom are allowable under § 103(a). At least for similar reasons, independent claims 9 and 16 and all claims dependent therefrom are also allowable under § 103(a).

Thus, the rejections of claims 1-22 rely on an improper combination of references, and further, the cited references do not disclose each limitation of claims 1-22. Accordingly, Applicant respectfully requests that the rejections of claims 1-22 under § 103(a) be withdrawn.

*Even if Combined, the Cited References Do Not Disclose the Claimed Invention*

*Cheng* describes a decision-making method suitable for a production planning environment. *Cheng* at Abstract. The method uses inputs such as the types of end products from a production environment, demand for end products, holding costs for components and end products, and initial inventory quantities. The *Cheng* method also makes intermediate and final calculations of inventory quantities and production/procurement volumes. *Id.* at col. 3, lines 9-60. *Cheng* combines implosion(TM) tools with analysis based on demand scenarios and compares the performance that results from various demand scenarios. *Id.* at col. 2, lines 29-41.

*Masch* relates to the management of risks in multiple-parameter physical systems. *Masch* at col. 1, lines 5-11. If *Masch* were combined with *Cheng*, *Masch* would impart *Cheng* with a capacity to identify situations in which boundary limits on risk-related activities cannot be feasibly met simultaneously, and with an ability to modify risk-limiting constraints so that a

calculation may be repeated with the modified inputs. *Masch* would also include various calculations using three-dimensional matrices. *Masch* at col. 14, line 58-col. 15, line 12. *Masch* would also add the ability to simplify decision-making processes by converting mathematical matrices from three or more dimensions to two dimensions. *Id.* at col. 16, lines 36-62.

It is not clear how such additions from *Masch* may be implemented or used in the setting of the production planning environment from *Cheng*. Applicant respectfully submits that such a combination would not produce the invention as set forth in the pending claims discussed above.

*Li* relates to market analysis and includes analysis of a financial asset's return in relation to its risk. *Li* at Abstract. If *Li* were combined with *Cheng* and *Masch*, *Li* would add the use of software to retrieve historical data and the ability to use that data to compute and update a numerical quantity such as a financial asset's strength. *Li* at col. 7, lines 42-58. At most, *Li* would teach the ability to store and retrieve information from software. However, Applicant respectfully submits that a combination of *Cheng*, *Masch*, and *Li* would not produce the invention as set forth in the pending claims discussed above.

### CONCLUSION

Applicant submits that all claims are now in condition for allowance, and an early notice to that effect is earnestly solicited. Nonetheless, should any issues remain that might be subject to resolution through a telephonic interview, the Examiner is requested to telephone the undersigned.

I hereby certify that this correspondence is being deposited with the United States Postal Service as First Class Mail in an envelope addressed to: Mail Stop Amendment, Commissioner for Patents, P. O. Box 1450, Alexandria, Virginia, 22313-1450, on 2005 Nov 10.

Cyrus Bharucha 2005 Nov 10  
Attorney for Applicant Date of Signature

Respectfully submitted,



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